



**TOWN OF MERRIMACK, NH  
PUBLIC WORKS DEPARTMENT  
WASTEWATER TREATMENT FACILITY**

36 MAST ROAD – P.O. Box 235 – MERRIMACK, NH 03054  
PHONE: 603-883-8196 – FAX: 603-886-1513  
[WWW.MERRIMACKNH.GOV](http://WWW.MERRIMACKNH.GOV)

**Merrimack, New Hampshire**

**2021 Industrial Pretreatment Annual Report**

**July 1, 2020 – June 30, 2021**

**USEPA NPDES Permit # NH0100161**



# TOWN OF MERRIMACK, NH PUBLIC WORKS DEPARTMENT WASTEWATER TREATMENT FACILITY

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## Merrimack, N.H. Industrial Pretreatment Program Annual Report July 1, 2020 – June, 30, 2021

### History

The Merrimack Industrial Pretreatment Program was approved on February 27, 1985. The program was developed in order to comply with the 40 CFR 403 General Pretreatment Regulations for Existing and New Sources, as mandated by the United States Environmental Protection Agency (USEPA).

### Staffing

Merrimack's Industrial Pretreatment Program is managed and implemented by Phillip Appert (Industrial Pretreatment Manager).

### Sewer Use Ordinance

The most recent Sewer Use Ordinance was approved by the USEPA on July 18, 2017. Merrimack Town Council approved and adopted the Ordinance on October 26, 2017.

### NPDES Permit

Merrimack's NPDES Permit NH 0100161 was reissued effective March 20, 2014 by USEPA. Permit renewal application was submitted on Dec. 1, 2018 and a completion letter was issued by USEPA on June 27, 2019.

### Biosolids Management

Merrimack produces high quality compost. It meets the qualifications of the NH Sludge Quality Certification (SQC) Program for low metals concentrations. The Town contracts with Agresource Inc. to market the compost for land application. The Town has a giveaway program for residents and markets some to local landscapers and other neighboring community members. In compliance with 40 CFR Part 503 regulations, an annual report is submitted to the USEPA summarizing the activities of the biosolids program. Compliance reports are also submitted to NHDES and Massachusetts DEP as required.

### Plant Operations

No pass through or interference was noted at the Merrimack Wastewater Treatment Facility during the July 1, 2020 – June 30, 2021 pretreatment calendar year.

# EPA REGION 1 ANNUAL PRETREATMENT REPORT SUMMARY SHEET

**Year: 2020-2021**

POTW Name:	Merrimack, NH Wastewater Treatment Facility
NPDES Permit #	NH0100161
Pretreatment Report Period Start Date:	July 1, 2020
Pretreatment Report Period End Date:	June 30, 2021
# of Significant Industrial Users (SIUs):	5
# of SIUs without Control Mechanisms:	0
# of SIUs not inspected:	0
# of SIUs not sampled:	0
# of SIUs in Significant Noncompliance (SNC) with Pretreatment Standards:	0
# of SIUs in SNC with Reporting Requirements	0
# of SIUs in SNC with Pretreatment Compliance Schedule:	0
# of SIUs in SNC Published in Newspaper:	0
# of SIUs with Compliance Schedules:	0
# of Violation Notices Issued to SIUs:	0
# of Administrative Orders Issued to SIUs:	0
# of Civil Suits Filed Against SIUs:	0
# of Criminal Suits Filed Against SIUs:	0
# of Categorical Industrial Users (CIUs):	3
# of SIUs in SNC:	0
<b>PENALTIES</b>	
Total Dollar Amount of Penalties Collected:	\$0
# of IUs from which Penalties have been collected:	0
<b>LOCAL LIMITS</b>	
Date of most recent technical evaluation of local limits:	6/5/2014
Date of most recent adoption of technically based local limits:	12/18/1991

MERRIMACK IPP USER LIST			
Permit #	Industry	Description	Address
1	Anheuser-Busch	Brewery	221 DW Highway
107	Able Ebenezer	Brewery	31 Columbia Circle
87	ACME Pressure Washing	Contract Pressure Washing	12 Wright Avenue
57	ATC Power Systems	Power Supplies	45 Depot Street
122	Avilite Corp.	Polystyrene Insulation	59 DW Highway
103	B & K Industrial	Contract Spray Painting	29 Railroad Avenue
27	BAE Systems IESI, Inc.	Military Electronics	130 & 144 DW Highway
116	BJT Trucking	Truck Repair	12 Star Drive
120	Circuit Technology Inc.	Contract Circuit Board Assembly	6A Continental Boulevard
95	Colt Refining Inc.	Metals Recycling	12A Star Drive
98	Dover Quickin Clean Car Wash	Car Wash	732 DW Highway
94	Elegance In Stone	Stone Fabrications	33 Elm Street, Suite 2
23	Elementis Chemicals	Groundwater Remediation	441 DW Highway (former Harcros Chemicals)
99	Exit 11 Car Wash	Car Wash	4 Whitney Street
97	Federal Aviation Administration	Air Traffic Control	25 Robert Mulligan Parkway
42	Fenway Car Wash	Car Wash	376 DW Highway
76	FMR Realty	Financial Services	1 Spartan Way
75	Gate City Collision	Car Repair	293 DW Highway
108	Independent Marble & Granite	Stone Fabrications	83 DW Highway
2	JCI/ Jones Chemical	Chemical Distributor	40 Railroad Avenue

112	Keyspin	Machine Shop	21 Continental Boulevard
15	Kollsmann	Medical and Military Equipment	220 DW Highway
121	Merrimack Outlets	Retail	80 Premium Outlets Blvd.
123	Missing The Ground Inc.	Food Truck	59 Donovan Court
44	Mobil One	Car Wash	386 DW Highway
104	Nanocomp	Carbon nanoproducts	57 DW Highway
116	Naticook Vet Hospital	Veterinarian	707 Millford Rd. (Pennichuck Sq.)
47	NH Hydraulics	Supply and Repair Hydraulic Products	3 Columbia Circle
111	Oztek	Electrical Devices	11 Continental Blvd.
42	Patriots Car Wash (formerly Fenway)	Car Wash	376 DW Highway
49	RIV Inc.	Precision Screens	31 Railroad Avenue
20	Saint Gobain Performance Plastics	Polymer Products	701 DW Highway
104	Service Master Elite	Cleaning	12 Continental Blvd.
86	Solidscape Inc.	3D Printing	316 DW Highway
114	Space Optics Research Labs, LLC	Optical Systems	15 Caron Avenue
119	Spraying Systems Co.	Spraying Systems	243 DW Highway
110	SRS Petroleum Services	Vehicle Washing	6 Wright Avenue

<b>MERRIMACK IPP CATEGORICAL AND SIGNIFICANT INDUSTRIAL USER LIST</b>				
Permit #	Industry	Category	SIU	Comments
1	Anheuser-Busch	None	Yes	Local Limits Only
95	Colt Refining Inc.	Metal Finishing (433)	Yes	Zero Discharge From Cat. Process
15	Kollsman	Metal Finishing (433)	Yes	Zero Discharge From Cat. Process
20	Saint Gobain Performance Plastics	Textile Mills	Yes	Local Limits Only
119	Spraying Systems Co.	Metal Finishing (433)	Yes	Zero Discharge From Cat. Process



# TOWN OF MERRIMACK, NH PUBLIC WORKS DEPARTMENT WASTEWATER TREATMENT FACILITY

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## CHANGES/ UPDATES TO THE MERRIMACK PRETREATMENT PROGRAM July 1, 2020 – JUNE 30, 2021

### Covid 19 Pandemic Effects:

All S.I.U's were sampled and inspected at least once as required. Communication and permitting with all industrial users continued as normal. No compliance issues with the pretreatment program were noted due to the pandemic.

### EPA Audit:

EPA and its consultants, PG Environmental conducted a virtual audit of the Merrimack Industrial Pretreatment Program in April 2021. The Sewer Use Ordinance review documented some minor changes be incorporated into this document. The Town will complete these required changes in a timely manner. The final audit report has not been received to date.

### Anheuser-Busch, LLC (AB):

The Town and AB continue to finalize the resolution of the May 27-28, 2020 Notice of Violation (NOV). AB is installing a pH adjustment system that will come on line if their effluent should fall below 7.0 s.u. This is intended to prevent hydrogen sulfide from being generated down stream of their discharge. AB has also agreed to install an electrical connection to the Flume Building, which is the Town owned property adjacent to their facility where compliance sampling occurs. The current electrical connection emanates from the WWTF Pump Station and will be cut off during the Phase III plant upgrade that is now commencing. These improvements are in lieu of the \$ 80,000. penalty associated with the NOV.

AB appealed their 2021 Wastewater Permit. The appeal objected to the Town requirement to treat 100 % of the K-filter flush and rinse water through the Oberlin Press System, as AB documented would occur in their Permit Application. The Town denied this portion of the Permit Appeal. The appeal is currently under review by Town and AB lawyers.

The Town copies EPA and NHDES on all correspondence regarding the above items.

**Saint Gobain (SG):**

The Town completed a video inspection of SG's sewer line in April 2021. The Town documented concerns regarding possible inflow/ infiltration of PFAS contaminated groundwater based on this inspection. PFAS levels detected at the end of the pretreatment process demonstrate effective PFAS removal while results from samples at the end of pipe document much higher results. SG will either relocate the sewer line or make repairs to correct deficiencies. SG and the Flatley Co. (owner of the property surrounding the sewer easement) are currently negotiating a possible line relocation.

SG has completed installation of a Regenerative Thermal Oxidizer (RTO) to remove PFAS from their air emissions. There is no wastewater associated with this installation.

**July 1, 2020- June 30, 2021 Merrimack, N.H. Sampling and Inspection Calendar**



**TOWN OF MERRIMACK, NH  
PUBLIC WORKS DEPARTMENT  
WASTEWATER TREATMENT FACILITY**

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**Industrial Compliance Summary: July 1, 2020 – June 30, 2021**

**There were no violations noted during this period. .**

**Influent Sampling**  
**Versus**  
**Maximum Allowable Headworks Loading**

Parameter	Inf. Conc. (mg/l)	*MAHL (LB./Day)	Inf. Lb./Day
Cd	<0.01	0.25	<0.14
Cr	<0.01	27.8	<0.14
Cu	0.102	21.38	1.41
CN	<0.02	4.11	<0.28
Pb	<0.01	3.30	<0.14
Hg	<0.0001	0.0991	<0.0014
Ni	0.042	7.94	0.58
Ag	<0.01	1.29	<0.14
Zn	0.354	41.13	4.88
As	<0.1	3.41	<1.38
No inhibition is demonstrated based on the above results.			
Sampling results enclosed (6/21/21. Flow = 1.653 MGD).			
* Maximum Allowable Headworks Loading			

**Effluent Sampling- 6/3/2021**  
**versus**  
**Chronic Water Quality Standards**

Parameter	Chronic Water Quality Standard (mg/l)*	Effluent Result (mg/l)	Dilution Ratio Result (76-1) (mg/l)
Cd	0.00025	<0.01	< 0.00013
Cr	0.074	<0.01	<0.00013
Cu	0.009	0.0150	0.0002
CN	0.0052	<0.02	<0.00026
Pb	0.0025	<0.01	<0.00013
Hg	0.00077	<0.0001	<0.0000013
Ni	0.052	<0.011	<0.00013
Ag	0.0032	<0.01	<0.00013
Zn	0.120	0.053	0.0007
As	0.150	<0.1	<0.0013
Se	0.005	<0.1	<0.0013

No inhibition is demonstrated based on the above results.

6/3/2021 Effluent Results Enclosed.

\* EPA National Water Quality Criteria.

Flow was 2.184 MGD



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**Influent, Effluent, Bioassay and Compost Analytical Results  
July 1, 2020 – June 30, 2021**

Monday, June 21, 2021

Phil Appert  
Merrimack Wastewater Treatment Facility  
P.O. Box 235  
Merrimack NH 03054

Project Name: Influent

Lab ID: 21060080

Project #: N/A

Date Received: 6/4/2021

Project Location: N/A

Control #: 119328

Dear Phil Appert

Enclosed please find the laboratory results for the above referenced samples that were received by the ChemServe sample custodian on the above referenced date. Any abnormalities to the samples upon receipt would be noted on the enclosed chain of custody document. This report is not valid without a completed chain of custody with the corresponding control number, attached.

All samples analyzed by ChemServe are subject to quality standards. These standards are as stringent or more stringent than those established under NELAC, 40 CFR Part 136, state certification programs, and corresponding methodologies. ChemServe has a written QA/QC Procedures Manual that outlines these standards, and is available for your reference, upon request. Unless otherwise stated on the Chain of Custody or within the report, all holding times, preservation techniques, container types, and analytical methods are analogous with those outlined by NELAC. All units are based on "as received" weight unless denoted "dry".

Residual chlorine, sulfite and pH are intended to be performed as an immediate field analysis. Should any of these analyses be performed in the lab instead of in the field it will result in those analyses being performed out of holding time.

Acrolein and 2-chloroethylvinyl ether require an additional analysis with an un-preserved sample. If unpreserved vials were not submitted for these compounds then acrolein and 2-CEVE are not reported due to not meeting method requirements, but may be reported as estimated upon request for EPA 624.1 or EPA 524.2.

I certify that I have reviewed the above referenced analytical data and state forms, and I have found this report within compliance with the procedures outlined within NELAC. ChemServe's certified parameter list can be found at <http://www.chemservelab.com/Laboratory-Information-and-Documentation.aspx>

Dr. Jamie Fitzgerald PhD  
President/Laboratory Director



Certificate Number 1008

Merrimack Wastewater Treatment Facility

Phil Appert                      Control #: 119328  
 P.O. Box 235                      Project Number: N/A  
 Merrimack    NH    03054              Project Name: Influent  
                                     Project Location: N/A

Lab ID: 21060080  
 Date: 6/21/2021

Lab ID: 21060080

### Sample Receiving and Comment Summary

Were samples received with a chain of custody?	Yes
Do all samples received match the chain of custody?	Yes
Were all samples received within applicable holding times?	Yes
Were all containers intact when received?	Yes
Were samples for volatile organic analysis free of headspace (per method)?	Yes
Was there evidence of cooling or submitted the same day as sampling?	Yes
Were samples collected with appropriate preservative if required?	Yes
Were samples for dissolved metals already filtered by the client or field sampling?	N/A
Were samples for O-phos filtered in the field?	N/A
Were samples received in the appropriate containers?	Yes
Were samples acceptable per any temperature requirements?	Yes

Sample	Method	Client Identity	Matrix	Analyst
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21060080-001	EPA 625.1	Influent 6-2-21	Wastewater	KristinaD
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Comment: Phenol d6, 2-Fluorobiphenyl, and Terphenyl d14 surrogates low due to matrix.

Sample	Method	Client Identity	Matrix	Analyst
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21060080-002	EPA 624.1	Influent 6-2-21	Wastewater	LauraB
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Comment: Reporting limits elevated due to matrix.

\* Blank comment sections denote "No Comment"



**317 Elm Street  
Milford, NH 03055  
(603) 673-5440  
[Sales@chemservelab.com](mailto:Sales@chemservelab.com)**

## Merrimack Wastewater Treatment Facility

Phil Appert  
P.O. Box 235  
Merrimack NH 03054

**Control #:** 119328  
**Project Number:** N/A  
**Project Name:** Influent  
**Project Location:** N/A

## Analytical Results

**Lab ID:** 21060080  
**Date:** 6/21/2021

Sample	Client Sample Identity		Start Date/Time Sampled:		Matrix	
21060080-001	Influent 6-2-21		6/3/2021 8:00:00 AM		6/3/2021 8:00:00 AM	Wastewater
Composite Start Date and Time		Composite End Date and Time				
Parameter	Method	Result	Qualifier	Date/Time Analyzed	RDL	Analyst
Aluminum	EPA 200.7	0.262 mg/L		6/21/2021	0.05	PaulF
Antimony	EPA 200.7	< 0.1 mg/L		6/21/2021	0.1	PaulF
Arsenic	EPA 200.7	< 0.1 mg/L		6/21/2021	0.1	PaulF
Beryllium	EPA 200.7	< 0.01 mg/L		6/21/2021	0.01	PaulF
Boron	EPA 200.7	< 0.5 mg/L		6/21/2021	0.5	PaulF
Cadmium	EPA 200.7	< 0.01 mg/L		6/21/2021	0.01	PaulF
Chromium	EPA 200.7	< 0.01 mg/L		6/21/2021	0.01	PaulF
Copper	EPA 200.7	0.102 mg/L		6/21/2021	0.01	PaulF
Hot Plate Digestion	EPA 200.7			6/6/2021	0	CharleneF
Lead	EPA 200.7	< 0.01 mg/L		6/21/2021	0.01	PaulF
Molybdenum	EPA 200.7	< 0.01 mg/L		6/21/2021	0.01	PaulF
Nickel	EPA 200.7	0.042 mg/L		6/21/2021	0.01	PaulF
Selenium	EPA 200.7	< 0.1 mg/L		6/21/2021	0.1	PaulF
Silver	EPA 200.7	< 0.01 mg/L		6/21/2021	0.01	PaulF
Titanium	EPA 200.7	< 0.01 mg/L		6/21/2021	0.01	PaulF
Zinc	EPA 200.7	0.354 mg/L		6/21/2021	0.01	PaulF
Mercury	EPA 245.1	< 0.0001 mg/L		6/16/2021	0.0001	PaulF
Nitrate	EPA 300.0	< 1 mg/L		6/4/2021 10:17:00 PM	1	PaulF
Nitrite	EPA 300.0	< 0.1 mg/L		6/4/2021 10:17:00 PM	0.1	PaulF
Extraction 625	EPA 625 Ext.			6/9/2021	0	DrewP
1,2,4-Trichlorobenzene	EPA 625.1	< 20 ug/L		6/17/2021	20	KristinaD
1,2-Dichlorobenzene	EPA 625.1	< 20 ug/L		6/17/2021	20	KristinaD
1,2-Diphenylhydrazine (As Azobenzene)	EPA 625.1	< 20 ug/L		6/17/2021	20	KristinaD
1,3-Dichlorobenzene	EPA 625.1	< 20 ug/L		6/17/2021	20	KristinaD
1,4-Dichlorobenzene	EPA 625.1	< 20 ug/L		6/17/2021	20	KristinaD
2,4,6-Trichlorophenol	EPA 625.1	< 20 ug/L		6/17/2021	20	KristinaD
2,4-Dichlorophenol	EPA 625.1	< 20 ug/L		6/17/2021	20	KristinaD
2,4-Dimethylphenol	EPA 625.1	< 40 ug/L		6/17/2021	40	KristinaD
2,4-Dinitrophenol	EPA 625.1	< 40 ug/L		6/17/2021	40	KristinaD
2,4-Dinitrotoluene	EPA 625.1	< 20 ug/L		6/17/2021	20	KristinaD
2,6-Dinitrotoluene	EPA 625.1	< 20 ug/L		6/17/2021	20	KristinaD
2-2-Oxybis (1-chloropropane)	EPA 625.1	< 20 ug/L		6/17/2021	20	KristinaD
2-Chloronaphthalene	EPA 625.1	< 20 ug/L		6/17/2021	20	KristinaD
2-Chlorophenol	EPA 625.1	< 20 ug/L		6/17/2021	20	KristinaD
2-Nitrophenol	EPA 625.1	< 20 ug/L		6/17/2021	20	KristinaD
3,3-Dichlorobenzidine	EPA 625.1	< 20 ug/L		6/17/2021	20	KristinaD
4,6-Dinitro-2-Methylphenol	EPA 625.1	< 20 ug/L		6/17/2021	20	KristinaD
4-Bromophenyl Phenyl Ether	EPA 625.1	< 20 ug/L		6/17/2021	20	KristinaD



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Sample	Client Sample Identity	Start Date/Time Sampled:	Matrix			
21060080-001	Influent 6-2-21	6/3/2021 8:00:00 AM	Wastewater			
Composite Start Date and Time	6/3/2021 8:00:00 AM	Composite End Date and Time				
Parameter	Method	Result	Qualifier	Date/Time Analyzed	RDL	Analyst
4-Chloro-3-Methylphenol	EPA 625.1	< 40 ug/L		6/17/2021	40	KristinaD
4-Chlorophenyl Phenyl Ether	EPA 625.1	< 20 ug/L		6/17/2021	20	KristinaD
4-Nitrophenol	EPA 625.1	< 20 ug/L		6/17/2021	20	KristinaD
Acenaphthene	EPA 625.1	< 20 ug/L		6/17/2021	20	KristinaD
Acenaphthylene	EPA 625.1	< 20 ug/L		6/17/2021	20	KristinaD
Acetophenone	EPA 625.1	< 20 ug/L		6/17/2021	20	KristinaD
Anthracene	EPA 625.1	< 20 ug/L		6/17/2021	20	KristinaD
Benzidine	EPA 625.1	< 40 ug/L		6/17/2021	40	KristinaD
Benzo[A]Anthracene	EPA 625.1	< 20 ug/L		6/17/2021	20	KristinaD
Benzo[A]Pyrene	EPA 625.1	< 20 ug/L		6/17/2021	20	KristinaD
Benzo[B]Fluoranthene	EPA 625.1	< 20 ug/L		6/17/2021	20	KristinaD
Benzo[G,H,I]Perylene	EPA 625.1	< 20 ug/L		6/17/2021	20	KristinaD
Benzo[K]Fluoranthene	EPA 625.1	< 20 ug/L		6/17/2021	20	KristinaD
Bis(2-Chloroethoxy)Methane	EPA 625.1	< 20 ug/L		6/17/2021	20	KristinaD
Bis(2-Chloroethyl)Ether	EPA 625.1	< 20 ug/L		6/17/2021	20	KristinaD
Bis(2-Ethylhexyl)Phthalate	EPA 625.1	< 20 ug/L		6/17/2021	20	KristinaD
Butylbenzylphthalate	EPA 625.1	< 20 ug/L		6/17/2021	20	KristinaD
Chrysene	EPA 625.1	< 20 ug/L		6/17/2021	20	KristinaD
Dibenz[A,H]Anthracene	EPA 625.1	< 20 ug/L		6/17/2021	20	KristinaD
Diethylphthalate	EPA 625.1	< 20 ug/L		6/17/2021	20	KristinaD
Dimethylphthalate	EPA 625.1	< 20 ug/L		6/17/2021	20	KristinaD
Di-N-Butylphthalate	EPA 625.1	< 20 ug/L		6/17/2021	20	KristinaD
Di-N-Octylphthalate	EPA 625.1	< 20 ug/L		6/17/2021	20	KristinaD
Fluoranthene	EPA 625.1	< 20 ug/L		6/17/2021	20	KristinaD
Fluorene	EPA 625.1	< 20 ug/L		6/17/2021	20	KristinaD
Hexachlorobenzene	EPA 625.1	< 20 ug/L		6/17/2021	20	KristinaD
Hexachlorobutadiene	EPA 625.1	< 20 ug/L		6/17/2021	20	KristinaD
Hexachlorocyclopentadiene	EPA 625.1	< 20 ug/L		6/17/2021	20	KristinaD
Hexachloroethane	EPA 625.1	< 20 ug/L		6/17/2021	20	KristinaD
Indeno[1,2,3-Cd]Pyrene	EPA 625.1	< 20 ug/L		6/17/2021	20	KristinaD
Isophorone	EPA 625.1	< 20 ug/L		6/17/2021	20	KristinaD
Naphthalene	EPA 625.1	< 20 ug/L		6/17/2021	20	KristinaD
Nitrobenzene	EPA 625.1	< 20 ug/L		6/17/2021	20	KristinaD
N-Nitrosodimethylamine	EPA 625.1	< 20 ug/L		6/17/2021	20	KristinaD
N-Nitroso-Di-N-Propylamine	EPA 625.1	< 20 ug/L		6/17/2021	20	KristinaD
N-Nitrosodiphenylamine	EPA 625.1	< 20 ug/L		6/17/2021	20	KristinaD
Pentachlorophenol	EPA 625.1	< 20 ug/L		6/17/2021	20	KristinaD
Phenanthrene	EPA 625.1	< 20 ug/L		6/17/2021	20	KristinaD
Phenol	EPA 625.1	< 20 ug/L		6/17/2021	20	KristinaD
Pyrene	EPA 625.1	< 20 ug/L		6/17/2021	20	KristinaD
Ammonia-N	SM 4500-NH3-D	21.6 mg/L		6/19/2021	2	HeatherS
Kjeldahl-N	SM4500-Norg/NH3-B	44.1 mg/L		6/17/2021	5	HeatherS

Merrimack Wastewater Treatment Facility

Phil Appert                              Control #: 119328  
 P.O. Box 235                              Project Number: N/A  
 Merrimack    NH    03054                      Project Name: Influent  
     Project Location: N/A

Analytical Results

Lab ID: 21060080  
 Date: 6/21/2021

Sample	Client Sample Identity	Start Date/Time Sampled:	Matrix
21060080-002	Influent 6-2-21	6/2/2021 11:20:00 AM	Wastewater
Composite Start Date and Time	6/2/2021 11:20:00 AM	Composite End Date and Time	
Parameter	Method	Result	Qualifier
Oil & Grease Total	EPA 1664A	8.99 mg/L	
1,1,1-Trichloroethane	EPA 624.1	< 10 ug/L	
1,1,2,2-Tetrachloroethane	EPA 624.1	> 10 ug/L	
1,1,2-Trichloroethane	EPA 624.1	< 10 ug/L	
1,1-Dichloroethane	EPA 624.1	< 10 ug/L	
1,1-Dichloroethene	EPA 624.1	< 10 ug/L	
1,2-Dichlorobenzene	EPA 624.1	< 10 ug/L	
1,2-Dichloroethane	EPA 624.1	< 10 ug/L	
1,2-Dichloropropane	EPA 624.1	< 10 ug/L	
1,3-Dichlorobenzene	EPA 624.1	< 10 ug/L	
1,4-Dichlorobenzene	EPA 624.1	< 10 ug/L	
2-Methoxy-2-Methyl Propane (MTBE)	EPA 624.1	< 10 ug/L	
Acrylonitrile	EPA 624.1	< 50 ug/L	
Benzene	EPA 624.1	< 10 ug/L	
Bromodichloromethane	EPA 624.1	< 10 ug/L	
Bromoform	EPA 624.1	< 10 ug/L	
Bromomethane	EPA 624.1	< 50 ug/L	
Carbon Disulfide	EPA 624.1	< 10 ug/L	
Carbon Tetrachloride	EPA 624.1	< 10 ug/L	
Chlorobenzene	EPA 624.1	< 10 ug/L	
Chloroethane	EPA 624.1	< 10 ug/L	
Chloroform	EPA 624.1	< 10 ug/L	
Chloromethane	EPA 624.1	< 10 ug/L	
Cis-1,2-Dichloroethene	EPA 624.1	< 10 ug/L	
Cis-1,3-Dichloropropene	EPA 624.1	< 10 ug/L	
Dibromochloromethane	EPA 624.1	< 10 ug/L	
Ethylbenzene	EPA 624.1	< 10 ug/L	
Methylene Chloride	EPA 624.1	< 50 ug/L	
Tetrachloroethene	EPA 624.1	< 10 ug/L	
Toluene	EPA 624.1	< 10 ug/L	
Trans-1,2-Dichloroethene	EPA 624.1	< 10 ug/L	
Trans-1,3-Dichloropropene	EPA 624.1	< 10 ug/L	
Trichloroethene	EPA 624.1	< 10 ug/L	
Trichlorofluoromethane	EPA 624.1	< 10 ug/L	
Vinyl Chloride	EPA 624.1	< 10 ug/L	
Cyanide	SM 4500-CN-E	< 0.02 mg/L	
			Date/Time Analyzed
			RDL
			Analyst

Qualifier:	Description:
B-	Method blank contaminated with target analyte.
B1-	BOD had total oxygen loss. Result reported as ">" the highest dilution.
B2-	BOD had no oxygen loss. Result reported as "<" the lowest dilution.
G-	Reporting limit elevated due to matrix interference.
H-	Method prescribed holding time exceeded.
J-	Indicates an estimated value. Value is less than the quantitation limit.
IL-	Internal Standard(s) recovery was low due to matrix. Result may be biased high.
IH-	Internal Standard(s) recovery was high due to matrix. Result may be biased low.
LH-	Laboratory control spike(s) was high. Results may be biased high.
LL-	Laboratory control spike(s) was low. Results may be biased low.
MH-	Matrix spike recovery high due to matrix. Results may be biased high.
ML-	Matrix spike recovery low due to matrix. Results may be biased low.
N-	Non-target compound. Reported as a TIC.
NC-	Spike recovery was not calculated due to the concentration of the analyte being >4 times the concentration of the spike added.
R-	RPD outside acceptable recovery limits.
RO-	Sample received out of holding time.
SH-	Surrogate recovery high due to matrix
SL-	Surrogate recovery low due to matrix
U-	BOD/CBOD blank had an oxygen depletion greater than the suggested amount of 0.200.
V-	Sample pH for analysis was not within the required range when checked at time of analysis.
Z	Too numerous to count (TNTC)

An "A" in the result column on the report indicates absent for presence/absent bacteria and a "P" indicates present for presence/absent bacteria.



## Surrogate Report

Client: Merrimack Wastewater Treatment Facility

Order #: 21060080

Matrix: Wastewater

Units: ug/L		Method	Percent	Control	Surrogate	Surrogate
Sample Number	Surrogate		Recovery	Limits	Amount	Result
21060080-002	4-Bromofluorobenzene	EPA 624.1	95.8	70-130	20	19.16
21060080-002	4-Bromofluorobenzene	EPA 624.1	95.8	70-130	20	19.16
21060080-002	4-Bromofluorobenzene	EPA 624.1	95.8	70-130	20	19.16
21060080-002	Dibromofluoromethane	EPA 624.1	118.45	70-130	20	23.69
21060080-002	Dibromofluoromethane	EPA 624.1	118.45	70-130	20	23.69
21060080-002	Dibromofluoromethane	EPA 624.1	118.45	70-130	20	23.69
21060080-002	Toluene-d8	EPA 624.1	97.2	70-130	20	19.44
21060080-002	Toluene-d8	EPA 624.1	97.2	70-130	20	19.44
21060080-002	Toluene-d8	EPA 624.1	97.2	70-130	20	19.44

Units: ug/L		Method	Percent	Control	Surrogate	Surrogate
Sample Number	Surrogate		Recovery	Limits	Amount	Result
21060080-001	2,4,6-Tribromophenol	EPA 625.1	37.96	15-115	50	18.98
21060080-001	2,4,6-Tribromophenol	EPA 625.1	37.96	15-115	50	18.98
21060080-001	2-Fluorobiphenyl	EPA 625.1	23.36	30-130	25	5.84
21060080-001	2-Fluorobiphenyl	EPA 625.1	23.36	30-130	25	5.84
21060080-001	2-Fluorophenol	EPA 625.1	19.48	15-115	50	9.74
21060080-001	2-Fluorophenol	EPA 625.1	19.48	15-115	50	9.74
21060080-001	Nitrobenzene-d5	EPA 625.1	30.32	30-130	25	7.58
21060080-001	Nitrobenzene-d5	EPA 625.1	30.32	30-130	25	7.58
21060080-001	Phenol-d6	EPA 625.1	13.84	15-115	50	6.92
21060080-001	Phenol-d6	EPA 625.1	13.84	15-115	50	6.92
21060080-001	Terphenyl-d14	EPA 625.1	29.92	30-130	25	7.48
21060080-001	Terphenyl-d14	EPA 625.1	29.92	30-130	25	7.48

317 Elm Street Milford, NH 03055  
(603) 673-5440/Fax (603) 673-0366

## CHAIN OF CUSTODY

## PROJECT INFORMATION

CUSTOMER: Merriam Creek WTEADDRESS: 36 First Rd., P.O. Box 235CITY/STATE/ZIP: Merriam Creek NH 03054TELEPHONE: 420-1624REPORT TO: Phil Aspart

EMAIL TO:

P.O. NUMBER:

INVOICE TO:

JOB NAME: Influent

JOB NUMBER: \_\_\_\_\_

LOCATION: \_\_\_\_\_

INVOICE EMAIL: \_\_\_\_\_

## SAMPLE INFORMATION

## TURNAROUND TIME: (CIRCLE ONE):

10-DAY STANDARD

RUSH (MUST BE PRE-APPROVED)

7 day

5 day

4 day

3 day

2 day

1 day

Same Day

MCP  YES  GW1  GW3NO  GW2

① MATRIX  
SOLID(S)  
GROUNDS  
WATER(W)  
WASTE(W/W)  
② # OF  
CONTAINERS

③ CONTAINER  
AND  
PRESERVATIVE  
NOTES  
H2O2  
2004

## FIELD READING(S) &amp; COMMENTS:

Method(s) -

Al, As, Cd, Cr, Cu, Pb, Mg,Ni, Ag, Zn, Sb, Be, B,Mo, Se, TiGROUP # 70600806/1810:45DATETIMEDATETIMEDATETIMEDATETIMEDATETIMEDATETIME

④ CUSTODY  
SAMPLER: Phil Aspart  
(print name)  
SIGNATURE: Phil Aspart

RELINQUISHED: Phil Aspart  
DATE: 6/13/21 TIME: 8:00

RECEIVED: \_\_\_\_\_  
DATE: \_\_\_\_\_ TIME: \_\_\_\_\_

RELINQUISHED: \_\_\_\_\_

RECEIVED FOR LAB: K Taylor

SAMPLE CHECK LIST:  
RECEIVED WITHIN HOLD TIME  YES OR NO  
RECEIVED IN GOOD CONDITION  YES OR NO  
TEMP BLANK 1.9 °C

SHIPPED OR DELIVERED

SAMPLES WERE PROPERLY PRESERVED  YES  NO  N/A

IF NO EXPLAIN:

FIELD LAB WT WT

Monday, June 21, 2021

Phil Appert  
Merrimack Wastewater Treatment Facility  
P.O. Box 235  
Merrimack NH 03054

Project Name: Effluent

Lab ID: 21060079

Project #: N/A

Date Received: 6/4/2021

Project Location: N/A

Control #: 111818

Dear Phil Appert

Enclosed please find the laboratory results for the above referenced samples that were received by the ChemServe sample custodian on the above referenced date. Any abnormalities to the samples upon receipt would be noted on the enclosed chain of custody document. This report is not valid without a completed chain of custody with the corresponding control number, attached.

All samples analyzed by ChemServe are subject to quality standards. These standards are as stringent or more stringent than those established under NELAC, 40 CFR Part 136, state certification programs, and corresponding methodologies. ChemServe has a written QA/QC Procedures Manual that outlines these standards, and is available for your reference, upon request. Unless otherwise stated on the Chain of Custody or within the report, all holding times, preservation techniques, container types, and analytical methods are analogous with those outlined by NELAC. All units are based on "as received" weight unless denoted "dry".

Residual chlorine, sulfite and pH are intended to be performed as an immediate field analysis. Should any of these analyses be performed in the lab instead of in the field it will result in those analyses being performed out of holding time.

Acrolein and 2-chloroethylvinyl ether require an additional analysis with an un-preserved sample. If unpreserved vials were not submitted for these compounds then acrolein and 2-CEVE are not reported due to not meeting method requirements, but may be reported as estimated upon request for EPA 624.1 or EPA 524.2.

I certify that I have reviewed the above referenced analytical data and state forms, and I have found this report within compliance with the procedures outlined within NELAC. ChemServe's certified parameter list can be found at <http://www.chemservelab.com/Laboratory-Information-and-Documentation.aspx>



Dr. Jamie Fitzgerald PhD  
President/Laboratory Director



Certificate Number 1008

Merrimack Wastewater Treatment Facility

Phil Appert                      Control #: 111818  
 P.O. Box 235                      Project Number: N/A  
 Merrimack    NH    03054              Project Name: Effluent  
 Project Location: N/A

Lab ID: 21060079  
 Date: 6/21/2021

Lab ID: 21060079

### Sample Receiving and Comment Summary

Were samples received with a chain of custody?	Yes
Do all samples received match the chain of custody?	Yes
Were all samples received within applicable holding times?	Yes
Were all containers intact when received?	Yes
Were samples for volatile organic analysis free of headspace (per method)?	Yes
Was there evidence of cooling or submitted the same day as sampling?	Yes
Were samples collected with appropriate preservative if required?	Yes
Were samples for dissolved metals already filtered by the client or field sampling?	N/A
Were samples for O-phos filtered in the field?	N/A
Were samples received in the appropriate containers?	Yes
Were samples acceptable per any temperature requirements?	Yes

Sample	Method	Client Identity	Matrix	Analyst
21060079-002	EPA 624.1	Effluent 6-3-21	Wastewater	LauraB

Comment: Reporting limits elevated due to matrix.

\* Blank comment sections denote "No Comment"



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Merrimack Wastewater Treatment Facility

Phil Appert                              Control #: 111818  
P.O. Box 235                              Project Number: N/A  
Merrimack    NH    03054                      Project Name: Effluent  
    Project Location: N/A

Analytical Results

Lab ID: 21060079  
Date: 6/21/2021

Sample	Client Sample Identity	Start Date/Time Sampled:	Matrix			
21060079-001	Effluent 6-3-21	6/4/2021 8:00:00 AM	Wastewater			
Composite Start Date and Time	6/4/2021 8:00:00 AM	Composite End Date and Time				
Parameter	Method	Result	Qualifier	Date/Time Analyzed	RDL	Analyst
Aluminum	EPA 200.7	< 0.05 mg/L		6/7/2021	0.05	PaulF
Antimony	EPA 200.7	< 0.1 mg/L		6/7/2021	0.1	PaulF
Arsenic	EPA 200.7	< 0.1 mg/L		6/7/2021	0.1	PaulF
Beryllium	EPA 200.7	< 0.01 mg/L		6/7/2021	0.01	PaulF
Boron	EPA 200.7	< 0.5 mg/L		6/7/2021	0.5	PaulF
Cadmium	EPA 200.7	< 0.01 mg/L		6/7/2021	0.01	PaulF
Chromium	EPA 200.7	< 0.01 mg/L		6/7/2021	0.01	PaulF
Copper	EPA 200.7	0.015 mg/L		6/7/2021	0.01	PaulF
Hot Plate Digestion	EPA 200.7			6/6/2021	0	CharleneF
Lead	EPA 200.7	< 0.01 mg/L		6/7/2021	0.01	PaulF
Molybdenum	EPA 200.7	< 0.01 mg/L		6/7/2021	0.01	PaulF
Nickel	EPA 200.7	0.011 mg/L		6/7/2021	0.01	PaulF
Selenium	EPA 200.7	< 0.1 mg/L		6/7/2021	0.1	PaulF
Silver	EPA 200.7	< 0.01 mg/L		6/7/2021	0.01	PaulF
Titanium	EPA 200.7	< 0.01 mg/L		6/7/2021	0.01	PaulF
Zinc	EPA 200.7	0.053 mg/L		6/7/2021	0.01	PaulF
Mercury	EPA 245.1	< 0.0001 mg/L		6/16/2021	0.0001	PaulF
Nitrate	EPA 300.0	14.0 mg/L		6/9/2021 9:34:00 PM	1	PaulF
Nitrite	EPA 300.0	< 0.1 mg/L		6/9/2021 9:34:00 PM	0.1	PaulF
Extraction 625	EPA 625 Ext.			6/11/2021	0	DrewP
1,2,4-Trichlorobenzene	EPA 625.1	< 10 ug/L		6/17/2021	10	KristinaD
1,2-Dichlorobenzene	EPA 625.1	< 10 ug/L		6/17/2021	10	KristinaD
1,2-Diphenylhydrazine (As Azobenzene)	EPA 625.1	< 10 ug/L		6/17/2021	10	KristinaD
1,3-Dichlorobenzene	EPA 625.1	< 10 ug/L		6/17/2021	10	KristinaD
1,4-Dichlorobenzene	EPA 625.1	< 10 ug/L		6/17/2021	10	KristinaD
2,4,6-Trichlorophenol	EPA 625.1	< 10 ug/L		6/17/2021	10	KristinaD
2,4-Dichlorophenol	EPA 625.1	< 10 ug/L		6/17/2021	10	KristinaD
2,4-Dimethylphenol	EPA 625.1	< 20 ug/L		6/17/2021	20	KristinaD
2,4-Dinitrophenol	EPA 625.1	< 20 ug/L		6/17/2021	20	KristinaD
2,4-Dinitrotoluene	EPA 625.1	< 10 ug/L		6/17/2021	10	KristinaD
2,6-Dinitrotoluene	EPA 625.1	< 10 ug/L		6/17/2021	10	KristinaD
2-2-Oxybis (1-chloropropane)	EPA 625.1	< 10 ug/L		6/17/2021	10	KristinaD
2-Chloronaphthalene	EPA 625.1	< 10 ug/L		6/17/2021	10	KristinaD
2-Chlorophenol	EPA 625.1	< 10 ug/L		6/17/2021	10	KristinaD
2-Nitrophenol	EPA 625.1	< 10 ug/L		6/17/2021	10	KristinaD
3,3-Dichlorobenzidine	EPA 625.1	< 10 ug/L		6/17/2021	10	KristinaD
4,6-Dinitro-2-Methylphenol	EPA 625.1	< 10 ug/L		6/17/2021	10	KristinaD
4-Bromophenyl Phenyl Ether	EPA 625.1	< 10 ug/L		6/17/2021	10	KristinaD



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Sample	Client Sample Identity	Start Date/Time Sampled:	Matrix			
21060079-001	Effluent 6-3-21	6/4/2021 8:00:00 AM	Wastewater			
Composite Start Date and Time	6/4/2021 8:00:00 AM	Composite End Date and Time	Wastewater			
Parameter	Method	Result	Qualifier	Date/Time Analyzed	RDL	Analyst
4-Chloro-3-Methylphenol	EPA 625.1	< 20 ug/L		6/17/2021	20	KristinaD
4-Chlorophenyl Phenyl Ether	EPA 625.1	< 10 ug/L		6/17/2021	10	KristinaD
4-Nitrophenol	EPA 625.1	< 10 ug/L		6/17/2021	10	KristinaD
Acenaphthene	EPA 625.1	< 10 ug/L		6/17/2021	10	KristinaD
Acenaphthylene	EPA 625.1	< 10 ug/L		6/17/2021	10	KristinaD
Acetophenone	EPA 625.1	< 10 ug/L		6/17/2021	10	KristinaD
Anthracene	EPA 625.1	< 10 ug/L		6/17/2021	10	KristinaD
Benzidine	EPA 625.1	< 20 ug/L		6/17/2021	20	KristinaD
Benzo[A]Anthracene	EPA 625.1	< 10 ug/L		6/17/2021	10	KristinaD
Benzo[A]Pyrene	EPA 625.1	< 10 ug/L		6/17/2021	10	KristinaD
Benzo[B]Fluoranthene	EPA 625.1	< 10 ug/L		6/17/2021	10	KristinaD
Benzo[G,H,I]Perylene	EPA 625.1	< 10 ug/L		6/17/2021	10	KristinaD
Benzo[K]Fluoranthene	EPA 625.1	< 10 ug/L		6/17/2021	10	KristinaD
Bis(2-Chloroethoxy)Methane	EPA 625.1	< 10 ug/L		6/17/2021	10	KristinaD
Bis(2-Chloroethyl)Ether	EPA 625.1	< 10 ug/L		6/17/2021	10	KristinaD
Bis(2-Ethylhexyl)Phthalate	EPA 625.1	< 10 ug/L		6/17/2021	10	KristinaD
Butylbenzylphthalate	EPA 625.1	< 10 ug/L		6/17/2021	10	KristinaD
Chrysene	EPA 625.1	< 10 ug/L		6/17/2021	10	KristinaD
Dibenz[A,H]Anthracene	EPA 625.1	< 10 ug/L		6/17/2021	10	KristinaD
Diethylphthalate	EPA 625.1	< 10 ug/L		6/17/2021	10	KristinaD
Dimethylphthalate	EPA 625.1	< 10 ug/L		6/17/2021	10	KristinaD
Di-N-Butylphthalate	EPA 625.1	< 10 ug/L		6/17/2021	10	KristinaD
Di-N-Octylphthalate	EPA 625.1	< 10 ug/L		6/17/2021	10	KristinaD
Fluoranthene	EPA 625.1	< 10 ug/L		6/17/2021	10	KristinaD
Fluorene	EPA 625.1	< 10 ug/L		6/17/2021	10	KristinaD
Hexachlorobenzene	EPA 625.1	< 10 ug/L		6/17/2021	10	KristinaD
Hexachlorobutadiene	EPA 625.1	< 10 ug/L		6/17/2021	10	KristinaD
Hexachlorocyclopentadiene	EPA 625.1	< 10 ug/L		6/17/2021	10	KristinaD
Hexachloroethane	EPA 625.1	< 10 ug/L		6/17/2021	10	KristinaD
Indeno[1,2,3-Cd]Pyrene	EPA 625.1	< 10 ug/L		6/17/2021	10	KristinaD
Isophorone	EPA 625.1	< 10 ug/L		6/17/2021	10	KristinaD
Naphthalene	EPA 625.1	< 10 ug/L		6/17/2021	10	KristinaD
Nitrobenzene	EPA 625.1	< 10 ug/L		6/17/2021	10	KristinaD
N-Nitrosodimethylamine	EPA 625.1	< 10 ug/L		6/17/2021	10	KristinaD
N-Nitroso-Di-N-Propylamine	EPA 625.1	< 10 ug/L		6/17/2021	10	KristinaD
N-Nitrosodiphenylamine	EPA 625.1	< 10 ug/L		6/17/2021	10	KristinaD
Pentachlorophenol	EPA 625.1	< 10 ug/L		6/17/2021	10	KristinaD
Phenanthrene	EPA 625.1	< 10 ug/L		6/17/2021	10	KristinaD
Phenol	EPA 625.1	< 10 ug/L		6/17/2021	10	KristinaD
Pyrene	EPA 625.1	< 10 ug/L		6/17/2021	10	KristinaD
Ammonia-N	SM 4500-NH3-D	0.52 mg/L		6/19/2021	0.2	HeatherS
Kjeldahl-N	SM4500-Norg/NH3-B	2.83 mg/L		6/17/2021	0.5	HeatherS



**317 Elm Street  
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[Sales@chemservelab.com](mailto:Sales@chemservelab.com)**

## Merrimack Wastewater Treatment Facility

Phil Appert  
P.O. Box 235  
Merrimack NH 03054

**Control #:** 111818  
**Project Number:** N/A  
**Project Name:** Effluent  
**Project Location:** N/A

## Analytical Results

**Lab ID:** 21060079  
**Date:** 6/21/2021

Sample	Client Sample Identity	Start Date/Time Sampled:	Matrix			
21060079-002	Effluent 6-3-21	6/3/2021 8:30:00 AM	Wastewater			
Parameter	Method	Result	Qualifier	Date/Time Analyzed	RDL	Analyst
Oil & Grease Total	EPA 1664A	< 5 mg/L		6/16/2021	5	HeatherS
1,1,1-Trichloroethane	EPA 624.1	< 10 ug/L		6/9/2021	10	LauraB
1,1,2,2-Tetrachloroethane	EPA 624.1	< 10 ug/L		6/9/2021	10	LauraB
1,1,2-Trichloroethane	EPA 624.1	< 10 ug/L		6/9/2021	10	LauraB
1,1-Dichloroethane	EPA 624.1	< 10 ug/L		6/9/2021	10	LauraB
1,1-Dichloroethene	EPA 624.1	< 10 ug/L		6/9/2021	10	LauraB
1,2-Dichlorobenzene	EPA 624.1	< 10 ug/L		6/9/2021	10	LauraB
1,2-Dichloroethane	EPA 624.1	< 10 ug/L		6/9/2021	10	LauraB
1,2-Dichloropropane	EPA 624.1	< 10 ug/L		6/9/2021	10	LauraB
1,3-Dichlorobenzene	EPA 624.1	< 10 ug/L		6/9/2021	10	LauraB
1,4-Dichlorobenzene	EPA 624.1	< 10 ug/L		6/9/2021	10	LauraB
2-Methoxy-2-Methyl Propane (MTBE)	EPA 624.1	< 10 ug/L		6/9/2021	10	LauraB
Acrylonitrile	EPA 624.1	< 50 ug/L		6/9/2021	50	LauraB
Benzene	EPA 624.1	< 10 ug/L		6/9/2021	10	LauraB
Bromodichloromethane	EPA 624.1	< 10 ug/L		6/9/2021	10	LauraB
Bromoform	EPA 624.1	< 10 ug/L		6/9/2021	10	LauraB
Bromomethane	EPA 624.1	< 50 ug/L		6/9/2021	50	LauraB
Carbon Disulfide	EPA 624.1	< 10 ug/L		6/9/2021	10	LauraB
Carbon Tetrachloride	EPA 624.1	< 10 ug/L		6/9/2021	10	LauraB
Chlorobenzene	EPA 624.1	< 10 ug/L		6/9/2021	10	LauraB
Chloroethane	EPA 624.1	< 10 ug/L		6/9/2021	10	LauraB
Chloroform	EPA 624.1	< 10 ug/L		6/9/2021	10	LauraB
Chloromethane	EPA 624.1	< 10 ug/L		6/9/2021	10	LauraB
Cis-1,2-Dichloroethene	EPA 624.1	< 10 ug/L		6/9/2021	10	LauraB
Cis-1,3-Dichloropropene	EPA 624.1	< 10 ug/L		6/9/2021	10	LauraB
Dibromochloromethane	EPA 624.1	< 10 ug/L		6/9/2021	10	LauraB
Ethylbenzene	EPA 624.1	< 10 ug/L		6/9/2021	10	LauraB
Methylene Chloride	EPA 624.1	< 50 ug/L		6/9/2021	50	LauraB
Tetrachloroethene	EPA 624.1	< 10 ug/L		6/9/2021	10	LauraB
Toluene	EPA 624.1	< 10 ug/L		6/9/2021	10	LauraB
Trans-1,2-Dichloroethene	EPA 624.1	< 10 ug/L		6/9/2021	10	LauraB
Trans-1,3-Dichloropropene	EPA 624.1	< 10 ug/L		6/9/2021	10	LauraB
Trichloroethene	EPA 624.1	< 10 ug/L		6/9/2021	10	LauraB
Trichlorofluoromethane	EPA 624.1	< 10 ug/L		6/9/2021	10	LauraB
Vinyl Chloride	EPA 624.1	< 10 ug/L		6/9/2021	10	LauraB
Cyanide	SM 4500-CN-E	< 0.02 mg/L		6/11/2021	0.02	HeatherS

**Qualifier:** **Description:**

- B- Method blank contaminated with target analyte.  
B1- BOD had total oxygen loss. Result reported as ">" the highest dilution.  
B2- BOD had no oxygen loss. Result reported as "<" the lowest dilution.  
G- Reporting limit elevated due to matrix interference.  
H- Method prescribed holding time exceeded.  
J- Indicates an estimated value. Value is less than the quantitation limit.  
IL- Internal Standard(s) recovery was low due to matrix. Result may be biased high.  
IH- Internal Standard(s) recovery was high due to matrix. Result may be biased low.  
LH- Laboratory control spike(s) was high. Results may be biased high.  
LL- Laboratory control spike(s) was low. Results may be biased low.  
MH- Matrix spike recovery high due to matrix. Results may be biased high.  
ML- Matrix spike recovery low due to matrix. Results may be biased low.  
N- Non-target compound. Reported as a TIC.  
NC- Spike recovery was not calculated due to the concentration of the analyte being >4 times the concentration of the spike added.  
R- RPD outside acceptable recovery limits.  
RO- Sample received out of holding time.  
SH- Surrogate recovery high due to matrix  
SL- Surrogate recovery low due to matrix  
U- BOD/CBOD blank had an oxygen depletion greater than the suggested amount of 0.200.  
V- Sample pH for analysis was not within the required range when checked at time of analysis.  
Z- Too numerous to count (TNTC)

An "A" in the result column on the report indicates absent for presence/absent bacteria and a "P" indicates present for presence/absent bacteria.



## Surrogate Report

Client: Merrimack Wastewater Treatment Facility

Order #: 21060079

Matrix: Wastewater

Units:	ug/L		Percent Recovery	Control Limits	Surrogate Amount	Surrogate Result
Sample Number	Surrogate	Method				
21060079-002	4-Bromofluorobenzene	EPA 624.1	92.45	70-130	20	18.49
21060079-002	4-Bromofluorobenzene	EPA 624.1	92.45	70-130	20	18.49
21060079-002	4-Bromofluorobenzene	EPA 624.1	92.45	70-130	20	18.49
21060079-002	Dibromofluoromethane	EPA 624.1	115.9	70-130	20	23.18
21060079-002	Dibromofluoromethane	EPA 624.1	115.9	70-130	20	23.18
21060079-002	Dibromofluoromethane	EPA 624.1	115.9	70-130	20	23.18
21060079-002	Toluene-d8	EPA 624.1	97.3	70-130	20	19.46
21060079-002	Toluene-d8	EPA 624.1	97.3	70-130	20	19.46
21060079-002	Toluene-d8	EPA 624.1	97.3	70-130	20	19.46

Units:	ug/L		Percent Recovery	Control Limits	Surrogate Amount	Surrogate Result
Sample Number	Surrogate	Method				
21060079-001	2,4,6-Tribromophenol	EPA 625.1	52.66	15-115	50	26.33
21060079-001	2,4,6-Tribromophenol	EPA 625.1	52.66	15-115	50	26.33
21060079-001	2-Fluorobiphenyl	EPA 625.1	36.4	30-130	25	9.10
21060079-001	2-Fluorobiphenyl	EPA 625.1	36.4	30-130	25	9.10
21060079-001	2-Fluorophenol	EPA 625.1	23.26	15-115	50	11.63
21060079-001	2-Fluorophenol	EPA 625.1	23.26	15-115	50	11.63
21060079-001	Nitrobenzene-d5	EPA 625.1	41.32	30-130	25	10.33
21060079-001	Nitrobenzene-d5	EPA 625.1	41.32	30-130	25	10.33
21060079-001	Phenol-d6	EPA 625.1	17.92	15-115	50	8.96
21060079-001	Phenol-d6	EPA 625.1	17.92	15-115	50	8.96
21060079-001	Terphenyl-d14	EPA 625.1	45.6	30-130	25	11.40
21060079-001	Terphenyl-d14	EPA 625.1	45.6	30-130	25	11.40

Chain of Custody No. 111818  
Multiple COC's Yes No



317 Elm Street Milford, NH 03055  
(603) 673-5440/Fax (603) 673-0366

A CUSTOMER INFORMATION										B PROJECT INFORMATION										C SAMPLE INFORMATION									
CUSTOMER: <u>Merrimack WTR</u>					JOB NAME: <u>Effluent</u>					TURNAROUND TIME: (CIRCLE ONE:)																			
ADDRESS: <u>36 Merrimack, PO Box 235</u>					CITY/STATE/ZIP <u>Merrimack, NH 03054</u>					JOB NUMBER: _____					RUSH (MUST BE PRE-APPROVED)														
TELEPHONE: <u>6120-1624</u>					REPORT TO: <u>Phil Abbott</u>					LOCATION: _____					10 DAY STANDARD														
EMAIL TO: _____					P.O. NUMBER: _____					INVOICE TO: _____					7 day <input type="checkbox"/> 5 day <input type="checkbox"/> 4 day <input type="checkbox"/> 3 day <input type="checkbox"/> 2 day <input type="checkbox"/> 1 day <input type="checkbox"/> Same Day														
SAMPLER: <u>Phil Abbott</u>					SAMPLE IDENTIFICATION & LOCATION ©					COLLECTED					① MATRIX					② ANALYSIS									
(Print name)					(F) DATE					(G) TIME					SAMPLE TYPE					① MATRIX									
					6/4/21					8:00					SOIL					Metals									
					6/4/21					8:00					WATER					SVC 625									
					6/3/21					8:30					WATER					O & G									
					6/3/21					8:30					WATER					Cyanide									
					6/4/21					8:30					WATER					Ammonium / TKN									
					6/4/21					8:30					WATER					Nitrate / Nitrite									
④ CUSTODY										SAMPLE CHECK LIST:										FIELD READING(S) & COMMENTS:									
SIGNATURE: <u>Phil Abbott</u>										RECEIVED WITHIN HOLD TIME RECEIVED IN GOOD CONDITION <input checked="" type="checkbox"/> YES OR NO										Metals -									
RELINQUISHED: <u>Phil Abbott</u>										DATE <u>6/4/21</u> TIME <u>8:30</u>										As, Cd, Cr, Cu, Pb, Hg, Ni, Ag, Zn, Sb, Be, B,									
RECEIVED: _____										DATE <u>6/4/21</u> TIME <u>10:45</u>										IF NO EXPLAIN: <u>samples were properly preserved in field lab</u>									
RELINQUISHED: _____										DATE <u>6/4/21</u> TIME <u>10:45</u>										GROUP # <u>21060074</u> <u>6/18</u> <u>Mo, Se, Tr</u>									
RECEIVED FOR LAB: <u>K Taylor</u>																													

**MERRIMACK, NEW HAMPSHIRE  
WASTEWATER TREATMENT PLANT  
AQUATIC TOXICITY REPORT  
Annual 2020**

Date Prepared: July 29, 2020

Prepared for: TOWN OF MERRIMACK WWTP  
Mr. Phillip Appert  
36 Mast Road  
Merrimack, NH 03054

Prepared by: ENVIRONMENTAL MONITORING LABORATORY, INC  
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Wallingford, CT 06492  
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ENVIRONMENTAL MONITORING LABORATORY, INC.

## **IV. RESULTS**

### **A. Water Quality Chemical Data**

Results of chemical analyses are attached as Appendix I.

### **B. July Toxicity Data**

There was no toxicity was observed in either species assayed during this campaign. The Toxicity Test Summary Sheets for these assays are found in Exhibit D.



## V. DISCUSSION AND RECOMMENDATIONS

July bioassays showed no toxicity associated with MER's effluent under USEPA testing procedures. The results indicated  $LC_{50} > 100\%$  effluent and the chemical analyses were consistent with the bioassay results. Hence, MER meets compliance limits for all assays performed this year.



Report Date..... 28-Jul-20  
 EML Project ID.... 200715-MER  
 Description..... Annual Acute Toxicity  
 Date Sampled..... 13- Jul to 14-Jul-20  
 Date Submitted.... 15-Jul-20

Town of Merrimack Wastewater Facility  
 PO Box 235  
 36 Mast Road  
 Merrimack, NH 03054

Attn: Mr. Phillip Appert

Results in mg/L unless otherwise noted.  
 ND = Not Detected. NP = Not Performed.

Parameter	Effluent	Diluent	Det Limit	Completed		
				Date	Time	Analyst
Alkalinity	382.5	14.33	<1	22-Jul-20	1522	SM
Aluminum	ND	0.03	<0.02	15-Jul-20	1422	AB
Ammonia as N	0.16	0.19	<0.1	16-Jul-20	1700	JC
Cadmium	ND	ND	<0.0005	20-Jul-20	1329	AB
Calcium	25.56	6.43	<0.05	15-Jul-20	1422	AB
Chromium, total	ND	ND	<0.005	15-Jul-20	1422	AB
Copper	0.0143	0.0062	<0.0025	15-Jul-20	1422	AB
Cyanide, total	ND	NP	<0.010	21-Jul-20	1300	AB
Iron	0.69	0.23	<0.02	15-Jul-20	1422	AB
Hardness	275.1	21.45	<1	15-Jul-20	1422	AB
Lead	0.0008	ND	<0.0005	15-Jul-20	1149	AB
Magnesium	51.31	1.31	<0.05	15-Jul-20	1422	AB
Nickel	ND	ND	<0.004	15-Jul-20	1422	AB
pH (S.U)	7.92	7.07		15-Jul-20	0905	SM
Phenols	ND	NP	<0.05	21-Jul-20	1000	AB
Chlorine, Total Residual	ND	ND	<0.02	15-Jul-20	0905	SM
Silver	ND	ND	<0.0025	21-Jul-20	1356	AB
Conductance, specific (umhos)	1254.	147.	<2	15-Jul-20	0905	SM
Total Solids	829.	85.	<1	17-Jul-20	1700	AB
Total Suspended Solids	9.0	3.0	<1	15-Jul-20	1700	JC
Total Organic Carbon	14.5	4.8	<1	23-Jul-20	1700	MCC
Dissolved Solids, Total	820.	82.0	<1	17-Jul-20	1700	AB
Zinc	0.1143	0.0148	<0.0025	15-Jul-20	1422	AB

Technical Reviewer:

*L. M. J.*  
Title \_\_\_\_\_

Transcript Reviewer:

*H. Hillisley*  
Title \_\_\_\_\_

Tatjinder



ENVIRONMENTAL MONITORING LABORATORY, INC.